



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,311	07/10/2003	Hugo G.E. Ingelbrecht	132401-1	1310

23413 7590 07/13/2005

CANTOR COLBURN, LLP  
55 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002

EXAMINER

SHIPPEN, MICHAEL L

ART UNIT PAPER NUMBER

1621

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/604,311

Applicant(s)

INGELBRECHT ET AL.

Examiner

MICHAEL L. SHIPPEN

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 21-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 29-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/10/03; 8/12/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

The restriction requirement under 35 USC 121 and applicants' traversal thereof have been carefully considered. Applicants request further explanation of the materially different process referred to by the examiner in the original requirement. As seen from USP's 5,095,156 and 5,856,592, the use magnesium oxide catalysts in such processes is known. Obviously, the instant magnesium oxide catalysts could be used in such process. Accordingly, the requirement is deemed proper, repeated and made final.

Claims 21-28 stand withdrawn from consideration as not reading upon the elected invention, 37 CFR 1.142(b).

### ***Claim Rejections - 35 USC § 112<sup>1</sup>***

Claims 1-20 and 29-34 are rejected under 35 USC 112, second paragraph, as failing to particularly point out the claimed invention. The claim language "surface area" is ambiguous since it has been used in the claims to mean different things as seen from the language of claim 1 as compared to the claim language of claim 6. It is not seen that it can mean the same thing in both claims rendering the term confusing. As such, it unclear what is intended. Also, some claims do not indicate if properties recited are

---

<sup>1</sup> The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 112 that form the basis for the rejections under this section made in this Office action:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1621

for the catalysts in its calcined form or the uncalcined form rendering the claims indefinite.

***Claim Rejections - 35 USC § 102<sup>2</sup>***

Claims 1-4, 5-14, 16-20, 29-32 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 4,227,023. See the examples. While the reference does not recite a surface to volume ratio, the pellets of the reference of the size recited would inherently be within the claimed range. The claims that require a "filler" read on the calcium hydroxide and/or silica gel added to pellet composition. The pore diameters, surface area per gram and density recited in some of the claims would appear to be an inherent property of the powder used to form the pellets. As to the claims that require a specified aspect ratio, the pellets of the size used in the reference are within the claimed range.

Claims 1-4, 5-9, 11-14 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 3,968,172. See the examples. While the reference does not recite a surface to volume ratio, the pellets of the reference of the size recited would inherently be within the claimed range. The claims that require a "filler" read on the additives used in the catalyst compositions of Examples 8, 11 and 12. The density recited in some of the claims would appear to be an inherent property of the powder used to form the

---

<sup>2</sup> The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

pellets. As to the claims that require a specified aspect ratio, the pellets of the size used in the reference are within the claimed range.

***Claim Rejections - 35 USC § 103<sup>3</sup>***

Claims 1-20 and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4,227,023 optionally in view of USPAP 2003/0073572. USP 4,227,023 is applied as above. In addition to the examples, the reference suggest that various parameters such as the catalyst components, component ratios, and methods of forming the catalysts can be varied to afford similar results. The claims read on these obvious variation in the prior catalysts. As to the claims that recite specific properties of the catalysts, the optimization of the size and shape of the catalysts to balance catalyst reactant contact surface area and reactant flow through properties is well within the skill of the artisan through routine experimentation, *In re Aller*, 105 USPQ 233. As to the claims that recite a bimodal distribution of pores, it is well known that such catalysts possess some advantages as taught by USPAP 2003/0073572. One would expect that same advantages to be imparted to the USP 4,227,023 catalysts rendering such a modification of the prior art catalysts obvious.

---

<sup>3</sup> The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1621

Claims 1-20 and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 3,968,172 optionally in view of USPAP 2003/0073572. USP 3,968,172 is applied as above. In addition to the examples, the reference suggest that various parameters such as the catalyst components, component ratios, and methods of forming the catalysts can be varied to afford similar results. The claims read on these obvious variation in the prior catalysts. As to the claims that recite specific properties of the catalysts, the optimization of the size and shape of the catalysts to balance catalyst reactant contact surface area and reactant flow through properties is well within the skill of the artisan through routine experimentation, *In re Aller, supra*. As to the claims that recite a bimodal distribution of pores, it is well known that such catalysts possess some advantages as taught by USPAP 2003/0073572. One would expect that same advantages to be imparted to the USP 3,968,172 catalysts rendering such a modification of the prior art catalysts obvious.


#### ***Information Disclosure Statement***

The information disclosure statement filed August 12, 2003 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language.

Art Unit: 1621

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Michael L. Shippen** whose telephone number is **(571) 272-0647**. The Examiner's normal tour of duty is 7:30 AM to 4:00 PM. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(571) 272-1600**. The official group FAX machine number is **571-273-8300**.

MShippen  
July 11, 2005



**MICHAEL L. SHIPPEN**  
**PRIMARY EXAMINER**  
**ART UNIT 1621**